

Grocery Store • Lesson 13

Food Safety at the Grocery Store

Class periods: one to two 30-min. class periods

Supplement section: Grocery and Retail PA PAS for FCS: 9.3.3 A, 9.3.3 B, 9.3.6 B, 9.3.9 B, 9.3.12 A.

National Education Standards: FCS 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.6, 8.2.7, 9.2.1, 9.2.2, 9.2.3, 9.2.4, 9.2.5, 9.2.6; LA 2, 3, 035, 132, 278; SC 5.

LESSON SUMMARY

Students will learn about how temperature control and spoilage are connected. They will know the difference between expiration, sell-by, and use-by dates. The delicatessen can be a source of foodborne illness. Students will also learn what food safety practices to look for during food shopping trips.

Objectives

The students will be able to:

- Distinguish the difference between expiration, sell-by, and use-by dates on food containers by examining a bag of groceries.
- Evaluate a grocery store for food safety and sanitation practices.
- Create a poster or pamphlet that examines, describes, and/or diagrams food safety in the grocery store on the part of the store manager, employees, and the consumer.
- Find pictures of foods in the newspaper, explain how the food is stored, handled, displayed, and describe how the food is kept safe in the grocery store.

Materials Provided

Overhead:

1. Safety Tips at the Grocery Store
2. "Fight Bac" Principles

Worksheet:

1. Grocery Store Evaluation

Teacher Information Sheet:

1. Safe Shopping at the Grocery Store
2. Evaluation for Grocery Store Food Safety Poster or Pamphlet
3. Evaluation for NIE Activity

Suggested Presentation Aids

- Bag of groceries with various dates: use by, sell by, and expires on.

LESSON PLAN

Class Period 1

Introduction

Grocery stores and food markets use special procedures to sell safe foods to their customers.

Lesson Sequence

- Bring a bag of groceries with foods of various dates. Show the foods and explain the use-by, sell by, and expires-on dates.
- Show overhead 1: Safety Tips at the Grocery Store. (Teacher information sheet 1: Safe Shopping at the Grocery Store) Explain each tip and give examples of what would happen if these tips were not followed.
- Introduce the “Fight Bac” Principles (Overhead 2). Relate the principles to food safety in the grocery store.
 - a. Clean: Wash hands and surfaces often. Employees are clean and grocery store is clean all the time! They clean and sanitize all surfaces that hold food.
 - b. Separate: Don’t Contaminate. Eggs, milk, meat, poultry, deli foods, and produce are kept in separate refrigerated storage to prevent cross-contamination. Food is stored separately from non-food items. Raw foods are kept away from cooked foods.
 - c. Cook: Cook to proper temperatures. Deli foods such as chicken, ribs, pizza, and macaroni and cheese need to be cooked to proper temperatures to ensure that no bacteria grow and cause foodborne illness.
 - d. Chill: Refrigerate promptly. Maintain appropriate temperatures (40° F for refrigerators and 30°F or below for the freezer) for refrigerated and frozen foods. Deli counter must maintain correct temperatures for luncheon meats, cheeses, salads, sandwiches, etc.

- Schedule a field trip to the grocery store. Have students rate the grocery store for the following items. Use Grocery Store evaluation sheet (Worksheet 1).
 1. Rotation of food on the shelf, in refrigerated section, and frozen food section. Check dates on foods. Are older dated foods in the front and newer dated foods in the back?
 2. Dating of food: Examine foods for current use by, sell by, and expiration dates. Check for expired dates on foods.
 3. Clean store: shelves, display cases, deli cases, refrigerator and frozen food sections, floor, employees, etc.
 4. Maintain foods at appropriate temperatures. Bring thermometers to check temperatures of refrigerator and freezer sections.
 5. Food is not damaged, old, bruised, blemished, etc. (Bring this to the attention of the grocery store manager).
 6. Food items are stored away from non-food items.
 7. Food such as eggs, milk, meat, poultry, deli foods, and produce are stored separately to prevent cross-contamination.
- While at the grocery store, pay close attention to the deli counter and display cases. What might be the source of contamination behind the deli counter? Slicers! The safety of food behind the deli counter depends on the personal hygiene of the employees, the monitoring and cleaning of the equipment and utensils, temperature maintenance, and display cases that keep the product chilled at a safe temperature (36 to 40° F).

Closure class period 1

- Develop a poster or pamphlet for food safety in the grocery store. With permission from a grocery store manager, display the poster or distribute the pamphlet in the grocery store. (Teacher information sheet 2)

Class Period 2

- Grocery store field trip: Evaluate the grocery store using the evaluation sheet provided at the end of this lesson (Worksheet 1). Discuss the evaluation data.

Closure class period 2

- For homework, students will write a paragraph that summarizes the data taken from the grocery store evaluation and identifies areas of the grocery store that need improvement for food safety practices.

Suggested Learning Activities

- Find articles in the newspaper that relate to grocery store food safety, safety tips to use in the grocery store. Put the articles on a bulletin board or in a scrapbook. (Teacher information sheet 3)
- Find pictures of foods in the newspaper. Paste them on a piece of paper. Next to each one, explain how the food is packaged. Then write a sentence describing the special care that was taken to keep the food safe.
- Look at the food ads in the newspaper. Circle the foods listed in the ads that are refrigerated. While at the grocery store, look for sell-by dates on these refrigerated foods. Record the sell-by date of several foods and the date you found them in the grocery store. How many days are there between the two dates? Explain how this keeps food safe.

Evaluation

- Set up a lab situation where students have to identify the expiration, sell-by, and use-by dates on various foods
- Summary of grocery store data for complete data entries
- Grocery store food safety tips poster or pamphlet for accuracy, creativity, and neatness (Teacher information sheet 2)
- Newspaper article activity for accuracy, neatness, and organization (Teacher information sheet 3)

- Quiz #13
- Examination #4 at the end of the Grocery Store and Restaurant, and Institutional units.

References

- NIE newspaper supplement. From Farm to Table
- Nova Online/ The Brain Eater/ Food Safety Tips: <http://www.pbs.org/wgbh/nova/madcow/tips.html>
- Food Safety Starts At The Grocery Store, by Liz Delhaney. <http://www.homefamily.net/foodnutrition/foodsafety.html>
- Guelph Food Technology Centre. GFTC Articles in the Press. <http://www.gftc.ca/articles>
Food Safety in the Grocery Environment, The Plant Environment Counts: Protect Your Product Through Environmental Sampling, The Cost of Quality is less than you think, Auditing GMPs and HACCP Plans, Protecting Your Business, High-Pressure Processing of Foods: An Overview, and Washing Away Food borne Illness: Hand washing is number one for preventing the spread of pathogens
- Playing It Safe: A Market to Mealtime Checklist to Help Keep Food Safe. Developed by the National Cattlemen's Beef Association in cooperation with U.S. Department of Agriculture Food Safety and Inspection Service. Publication: 21-036 894500

Overhead 1

Safety Tips at the Grocery Store:

- **Monitor frozen food and refrigerator temperatures.**
- **Rotate stock regularly so foods are moved off the shelves by their sell-by dates.**
- **Clean and sanitize all surfaces that hold food.**
- **Employees follow safe hygiene practices.**
- **Safe handling procedures are placed on food packages, containers, and wrappers.**
- **Food is stored separately from non-food items.**
- **Many foods are kept in separate refrigerated storage areas to prevent cross-contamination (eggs, milk, meat, poultry, deli foods, produce).**
- **Check for damaged packages that may be torn or leaking. Report to grocery store manager.**

Overhead 2

Four Simple Steps to “Fight BAC”

1. Clean: Wash hands and surfaces often

2. Separate: Don't contaminate

3. Cook: Cook to proper temperatures

4. Chill: Refrigerate promptly

Worksheet 1

Name _____

Class/Period _____

Date _____

Grocery Store Evaluation

Rate the grocery store for the following items. Use the scale of one to ten, with one being the lowest and 10 being the highest. Write comments in the space provided. Give an explanation of what you saw.

Item to evaluate	Comments	Scale of 1-10
Rotation of food		1 2 3 4 5 6 7 8 9 10
Dating of food		1 2 3 4 5 6 7 8 9 10
Clean store/shelves, refrigerated and frozen food sections, floor, employees		1 2 3 4 5 6 7 8 9 10
Maintain appropriate temperatures for refrigerated and frozen foods		1 2 3 4 5 6 7 8 9 10
Damaged food		1 2 3 4 5 6 7 8 9 10
Deli counter and display cases clean and correct temperature (check for thermometer)		1 2 3 4 5 6 7 8 9 10
Food stored away from non-food items		1 2 3 4 5 6 7 8 9 10
Meat, poultry, milk, eggs, deli food and produce stored separately to avoid cross contamination		1 2 3 4 5 6 7 8 9 10

Teacher information sheet 1

Safe Shopping at the Grocery Store

- Pay attention to “sell-by,” “use-by,” and expiration dates on perishable products. If the “sell-by” date has expired, do not buy the product. The “use-by” date applies to use at home after purchase. It’s important to note that these dates refer to quality of food (taste, texture, smell, appearance) and are not a guarantee of an uncontaminated product, particularly if the original package is opened. Expiration dates are used to notify the consumer when the food is not safe to eat.
- Be sure packaging/storage is sound: refrigerated foods are kept cold, frozen foods are frozen solid, and there are no holes or tears in the packaging. Notify the grocery manager if there are problems with food packaging, storage, or sanitation of the store.
- When possible, keep raw meats, poultry, and fish products in separate plastic bags before setting them in your cart with other unprotected foods. This helps prevent cross-contamination.
- Select refrigerated and frozen foods last, just before checking out. Place perishable foods in the coldest part of your car (not in the trunk) or in a cooler if travel time is more than thirty minutes.
- Unload perishable foods first, and immediately refrigerate or freeze them.

Teacher Information Sheet 2

Name _____

Class/Period _____

Date _____

Evaluation for Grocery Store Food Safety Poster or Pamphlet

Grade the poster or pamphlet on the following criteria using the 0-4 rating scale. Four is the highest rate and zero is the lowest rate. Write comments in the boxes under the rating for each criterion.

Criteria	4	3	2	1	0
Content: Information is correct, complete, and useful					
Title/ Slogan: Catchy, focal point of poster or pamphlet					
Creativity: Use of color, line, unique pictures, words and slogans					
Neatness: Clean, organized, and not sloppy					
Spelling: All words spelled correctly					
Handed in on time: Handed in on due date. A point is deducted for each day late.					
Time Management: Time used wisely and working on project at allotted time					

Teacher information sheet 3

Name _____

Class/Period _____

Date _____

Evaluation for NIE Activity

Grade the NIE activity on the following criteria using the 0-4 rating scale. Four is the highest rate and zero is the lowest rate. Write comments in the boxes under the rating for each criteria.

Criteria	4	3	2	1	0
Content: Information is correct, complete, and useful					
Neatness: Clean, organized, and not sloppy					
Spelling: All words correctly spelled					
Handed in on time: Handed in on due date, a point is deducted for each day late.					
Time Management: Time used wisely and working on project at allotted time					

Quiz 13**Unit: Grocery and Retail****Lesson: Food Safety at the Grocery Store**

Name _____

Class/Period _____

Date _____

Matching: Match the vocabulary terms in column A with the definitions in column B. Write the letter of the definition in column B in the space next to the terms in column A.

A	B
_____ 1. Use- by date	A. Four powerful tools developed to keep food safe from harmful bacteria.
_____ 2. Sell-by date	B. Grocery stores move food regularly so foods are moved off the shelf by their sell-by dates.
_____ 3. Expires-on date	C. Applies to food use at home after purchase.
_____ 4. Rotation of food	D. Dates used to notify the consumer when food is not safe to eat.
_____ 5. "Fight BAC" principles	E. Grocery stores are to sell the food by this date or they must discard it. Consumers should not buy the product if past this date.

Short answer and fill in the blank: Write short answers or fill in the blank to the following questions and statements. Use complete sentences when answering questions.

1. Explain why grocery stores should rotate the food products.

2. Why do consumers have to observe the sell-by, use-by, and expires-on dates?

3. What does the consumer have to look for in packaging at the grocery store?

4. How are the “Fight BAC” principles related to grocery store food safety?

Quiz 13 Key

Unit: Grocery and Retail

Lesson: Food Safety at the Grocery Store

Matching: Match the vocabulary terms in column A with the definitions in column B. Write the letter of the definition in column B in the space next to the terms in column A.

A	B
<u>C</u> 1. Use- by date	A. Four powerful tools developed to keep food safe from harmful bacteria.
<u>E</u> 2. Sell-by date	B. Grocery stores move food regularly so foods are moved off the shelf by their sell-by dates.
<u>D</u> 3. Expires-on date	C. Applies to food use at home after purchase.
<u>B</u> 4. Rotation of food	D. Dates used to notify the consumer when food is not safe to eat.
<u>A</u> 5. "Fight BAC" principles	E. Grocery stores are to sell the food by this date or they must discard it. Consumers should not buy the product if past this date.

Short answer and fill in the blank: Write short answers or fill in the blank to the following questions and statements. Use complete sentences when answering questions.

- Explain why grocery stores should rotate the food products.
Rotate stock regularly so foods are moved off the shelves by their sell-by dates. Older food products should be stored on the front of the shelf of the refrigerator, freezer, or cupboard so that they can be used first. Newer foods should be stored toward the back in order of purchase.
- Why do consumers have to observe the sell-by, use-by, and expires-on dates?
Perishable foods will deteriorate or spoil after these dates. The consumer needs to pay attention to these dates to ensure that food is safe from pathogens.
- What does the consumer have to look for in packaging at the grocery store?
Be sure packaging is sound: no holes, leaks, tears, dents, open containers, odors, refrigerated and frozen foods are kept cold, frozen foods are solid, and no ice crystal formation.
- How are the "Fight BAC" principles related to grocery store food safety?
 - Clean: Wash hands and surfaces often.
Employees are clean and grocery store is clean all the time! They clean and sanitize all surfaces that hold food.*
 - Separate: Don't contaminate.*

Eggs, milk, meat, poultry, deli foods and produce are kept in separate refrigerate storage to prevent cross-contamination. Food is stored separately from non-food items. Raw foods are kept away from cooked foods.

- c. *Cook: cook to proper temperatures.*

Deli foods, such as chicken, ribs, pizza, macaroni and cheese, need to be cooked to proper temperatures to ensure that no bacteria grow and cause foodborne illness.

- d. *Chill: refrigerate promptly.*

Maintain appropriate temperatures (40° F for the refrigerators and 30° F or below for the freezer) for refrigerated and frozen foods. Deli counter must maintain correct temperatures for luncheon meats, cheeses, salads, sandwiches, etc.

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